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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/762,238	05/09/2001	Roger Guevremont	11099-US/PCT	2866

25319 7590 10/07/2003

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EXAMINER

GURZO, PAUL M

ART UNIT

PAPER NUMBER

2881

DATE MAILED: 10/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/762,238

Applicant(s)

GUEVREMONT ET AL.

Examiner

Paul Gurzo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-37 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 21-37 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05/09/01 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 2) ☐ Notice of Draftsman's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 0903. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 21, 22, 24, 25, 27, 29-31, 33, 34, 36, 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buryakov et al. ("A new method of separation of multi-atomic ions by mobility at atmospheric pressure using a high-frequency amplitude-asymmetric strong electric field", International Journal Mass Spectrometry and Ion Processes, 1999).

Regarding claims 21, 30, and 37, Buryakov et al. teach a method for identifying and separating ions comprising the steps of providing at least one ionization source (Fig. 2), an analyzer region defined by a space between at least first and second spaced apart electrodes, said analyzer region being in communication with at least one of each of a gas inlet, a gas outlet, an ion inlet, and introducing said ions into said analyzer region through said ion inlet (Fig. 2), applying an asymmetric waveform voltage (Fig. 1) and a direct current compensation voltage (equation 4) to at least one of said electrodes, setting said asymmetric waveform voltage (equation 4), varying said direct current compensation voltage (page 145, col. 1, lines 1-10 and equation 6) and measuring resulting transmitted ions at said ion outlet so as to produce a compensation voltage scan for said transmitted ions (page 145, col. 1, last paragraph), identifying peaks in said compensation voltage scan (Fig. 3), and setting said direct current compensation voltage to correspond to one of said peaks (page 146, col. 1, last paragraph) so as

to separate and enrich a desired ion (page 147, col. 2, last paragraph). They do not explicitly state the identification of isotopes including two isotopes of the same element or different isotopic composition, but the method used is also suitable for isotope identification. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to identify isotopes because the prior art state that it provides an improved method of ion separation even for ions with similar masses (page 145, col. 2, last paragraph) and for homologous ions (page 148, Conclusion).

Regarding claims 22 and 31, Buryakov et al. teaches atmospheric pressure (Abstract), and it is obvious that this occurs at room temperature.

Regarding claims 24, 25, 27, 33, and 34, Buryakov et al. teaches the use of mass spectrometry and ion intensity data (Abstract).

Regarding claims 29 and 36, Buryakov et al. teaches the possibility of continuous recording and identification of trace amounts of amines in atmospheric air (Abstract).

Claims 23, 26, 28, 32, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buryakov et al. ("A new method of separation of multi-atomic ions by mobility at atmospheric pressure using a high-frequency amplitude-asymmetric strong electric field", International Journal Mass Spectrometry and Ion Processes, 1999) in view of Hudgins et al. ("High resolution ion mobility for gas phase proteins: correlation between solution phase and gas phase conformations", Int. Journal for Mass Spec. and Ion Processes, 1997).

Regarding claims 23, 26, 28, 32, and 35, Buryakov et al. teaches the use of mass spectrometry (Abstract) and depicts an ion inlet (Fig. 2), but do not explicitly state the use of electrospray ionization. However, Hudgins et al. depict such ionization (Fig. 1). Therefore, it

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would have been obvious to one of ordinary skill in the art at the time the invention was made to use electrospray ionization because it will provide the appropriate ion transportation along the analyzer region.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Pertinarides et al. (5,763,876)


Miller et al. (6,512,224)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Gurzo whose telephone number is (703) 306-0532. The examiner can normally be reached on M-Thurs. 7:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Lee can be reached on (703) 308-4116. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

PMG
September 24, 2003


PAUL GURZO
SEPT 24 2003
EXAMINER